DOCUMENT RESUME

ED 356 424 CE 063 539

AUTHOR Stout, Mary W.
TITLE Achieving Competence: Army-VOTEC School Partnership Pilot Studies.
PUB DATE Nov 92
NOTE 7p.; Paper presented at the Annual Meeting of the American Association for Adult and Continuing Education (Anaheim, CA, November 4-7, 1992).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Comparative Analysis; Competence; *Cost Effectiveness; *Educational Cooperation; Educational Research; Job Skills; Military Personnel; Military Service; *Military Training; Models; Postsecondary Education; *Program Effectiveness; Secondary Education; Student Evaluation; *Vocational Schools
IDENTIFIERS *Army

ABSTRACT

To reduce Army training costs, the Training and Doctrine Command (TRADOC) investigated use of training at civilian secondary and postsecondary vocational-technical (VOTEC) institutions as an alternative to initial job training in Army service schools. Three models were used in the pilot study: the preservice training model in which civilian-trained VOTEC school graduates are recruited; inservice training model in which civilian VOTEC institutions train specific parts of Army courses; and exportable curriculum training model in which civilian VOTEC schools use an Army-developed curriculum. The Vocational Training Strategies study found that training content in the Army's Light Wheel Vehicle Mechanic course compared favorably with the VOTEC auto mechanic curriculum and the preservice training model was the most cost effective. Phase I of the Light Wheel Vehicle Mechanic Pilot Study began using the VOTEC training model. Findings indicated that VOTEC secondary school graduates scored as well as Army graduates, and postsecondary VOTEC graduates scored higher. The second phase of the pilot study involved recruitment of VOTEC graduates and assessment of training effectiveness, attrition, knowledge retention, and job performance. The Food Service VOTEC pilot study and its findings mirrored the Light Wheel Vehicle Mechanic study. The results demonstrated that using VOTEC institutions to train soldiers held great potential as an efficient and effective Army/VOTEC partnership. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED356424

ACHIEVING COMPETENCE: ARMY-VOTEC SCHOOL PARTNERSHIP PILOT STUDIES

Mary W. "Mimi" Stout
Fort Monroe, Virginia

ABSTRACT

In an effort to reduce Army training costs, the Headquarters, Training and Doctrine Command (TRADOC) is investigating use of training at civilian secondary and post-secondary vocational-technical (VOTEC) institutions as an alternative to initial job training known as advanced individual training (AIT) in Army service schools. Prime training courses selected for pilot study include those with high Army and VOTEC school curricular comparability and a large Army population to train for potential cost savings. VOTEC pilot study models include: (a) the pre-service training model in which civilian-trained VOTEC school graduates are recruited into the Army for specific occupations after passing a competency test, thereby reducing the length of Army training requirements, (b) the in-service training model in which civilian VOTEC institutions train specific parts of Army courses, and (c) the exportable curriculum training model in which civilian VOTEC schools use an Army-developed curriculum and competency tests to train students who express a desire to join the Army, thereby standardizing parts of the VOTEC school curriculum across states. This paper discusses pilot studies involving the pre-service training model in detail.

AUTHOR'S BIOGRAPHY

Mary W. "Mimi" Stout is an Instructional Systems Specialist in the Training Development and Analysis Directorate (TDAD), Deputy Chief of Staff for Training (DCST), Headquarters, Training and Doctrine Command (TRADOC), Fort Monroe, Virginia. She has completed nineteen years of Federal Service and has worked previously at Fort Leavenworth, Kansas, Fort Lee, Virginia, Fort Eustis, Virginia, and Vicenza, Italy. Her degrees include an Ed.S. from the College of William and Mary, an M.Ed. from the University of Virginia, and a B.A. from Mary Washington College. She is currently a doctoral candidate in the School of Education at the College of William and Mary. Her previous papers/ publications include: "Networked Computer Based Instruction for Federal Agencies" at the 1990 American Society for Training and Development (ASTD) Conference; "Joint Computer Based Instruction System (JCBIS)" in Army Trainer (Vol. 9, No. 2), Winter 1989; and "Empowering Soldier Learning - Electronic Credit Banking" at the 1987 American Association for Adult and Continuing Education (AAACE) Conference.

CE063539

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

MStout

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"

BEST COPY AVAILABLE

ACHIEVING COMPETENCE: ARMY - VOTEC SCHOOL PARTNERSHIP PILOT STUDIES

Mary W. "Mimi" Stout
Fort Monroe, Virginia

INTRODUCTION

Partnerships between educational institutions and industry have increased in recent years, encouraged by both federal legislation and budgetary retrenchment. Although formalized agreements of authority often exist, partnerships can also be informal. Shared concerns or mutual benefits are often motivating factors for partnerships.

Past relationships between the Army and civilian educational institutions can be described as partnerships. For example, in-service use of G.I. Bill and Army tuition assistance education benefits advanced the military careers of many soldiers, filled classrooms, and advanced the educational level of society as a whole. Today, however, there is potential for a new partnership between the Army and vocational-technical (VOTEC) secondary and post-secondary institutions.

A broad Army initiative called Army Training 21 may allow new partnerships between VOTEC institutions and the Army. In an effort to reduce training costs, Headquarters, U.S. Army Training and Doctrine Command (TRADOC) is investigating use of civilian VOTEC programs for selected Army training as an alternative to training at Army service schools. A mutual prime mover behind this idea is the need to enhance budgetary efficiency without degradation of training effectiveness during a period of retrenchment. Initial pilot study results reflect: (a) a potential for efficient and effective training of Army recruits by VOTEC institutions, (b) a potential for VOTEC institutions to become a major provider of Army recruits, and (c) a potential for the Army to be a major employer for trained VOTEC graduates.

Army Training 21 describes the types of Army courses conceptually best trained by VOTEC schools as "light green" and commonly taught by VOTEC schools in all states. This plan keeps the "dark green" training, military-specific courses not commonly taught by VOTEC schools, in the Army service schools. For example, under this concept auto mechanics is a "light green" course and infantryman is a "dark green" course.

VOTEC MODELS

Several VOTEC models are under initial investigation by the Army. These include: (a) the pre-service training model in which VOTEC graduates are recruited into the Army from civilian institutions and, if they pass a competency test, attend basic training and abbreviated initial job training, also known as advanced individual training (AIT), before being assigned

to their first unit or job, (b) the in-service training model in which civilian VOTEC institutions train soldiers on specific parts of Army courses after enlistment and basic training, thereby reducing or eliminating the Army service school AIT, and (c) the exportable curriculum training model in which the Army exports their curriculum to VOTEC institutions for training students interested in joining the Army, after which they must pass a competency test, attend basic training, attend VOTEC refresher training, and attend an abbreviated Army-specific AIT before being assigned to their first unit or job.

Two pilot studies in the pre-service training model have reportable results, while pilot studies involving the other two models are just getting underway. Pilot studies for two Army courses under the pre-service training model will be discussed in this paper.

Initial analysis reflects no cost efficiency from the in-service training model (second model). Based on these results, the in-service training model is being studied only to validate the curriculum of model three and not for implementation at this time.

VOCATIONAL TRAINING STRATEGIES REPORT - I

In February 1991, a HQ TRADOC study called the Vocational Training Strategies (VTS) Report-I was completed. The purpose of this report was:

1) To analyze training comparison between Army curricula known as program of instruction (POI) and the corresponding civilian VOTEC curriculum guides supplied by the Vocational-Technical Education Consortium of States (V-TECS) as representative of VOTEC curricula of twenty-three states.

2) To compare service school and VOTEC school training costs to be paid by the Army.

3) To identify legal or regulatory barriers to the VOTEC concept.

4) To determine the feasibility of using specific VOTEC models.

Results of the VTS Report-I set the stage for further investigation of the concept. Report results indicated: (a) training content in the Army's 63B10 Light Wheel Vehicle Mechanic course compared favorably to the VOTEC Auto Mechanic curriculum, and VOTEC schools were capable of teaching 98 percent of Army tasks, if supplied the equipment, (b) the pre-service training model was determined to be the recommended model because it was the most cost effective, and (c) U.S. Code Title 10, Section 671 requires twelve weeks of Army training at initial entry; since basic training is eight weeks long, the Army must train soldiers at service schools an additional four weeks in advanced individual training, thus limiting the total movement of Army training to VOTEC schools.

63B10 LIGHT WHEEL VEHICLE MECHANIC PILOT STUDY

During April 1991, Phase I of the 63B10 Light Wheel Vehicle Mechanic Pilot Study began using the pre-service VOTEC training model. The purpose of this study was to compare the technical knowledge of VOTEC secondary and post-secondary school graduates with soldiers graduating from the 63B10 course using a competency test developed for this purpose by a nationally recognized certification agency. In this case, the National Institute for Automotive Service Excellence (ASE) developed the test in conjunction with the U.S. Army Ordnance Center and School at Aberdeen Proving Ground, Maryland. The test was administered by American College Testing (ACT) to a sample of 162 graduating secondary and 121 graduating post-secondary VOTEC students in Pennsylvania, and to 112 graduating Army students at Fort Dix, New Jersey, Fort Jackson, South Carolina, and Fort Leonard Wood, Missouri.

Results of Phase I of the 63B10 Pilot Study were encouraging. VOTEC secondary school graduates scored equally as well as 63B10 Army graduates, while post-secondary VOTEC graduates scored statistically significantly higher than Army graduates on the ASE-developed competency test (t-test $p < .001$). A survey of VOTEC students who had considered joining the Army reflected that job certification and choice of assignment provide more incentive for them to enlist than a monetary bonus or quick promotion.

Based on these results, the 63B10 Pilot Study moved into Phase II in February 1992. Purposes of Phase II were to determine: (a) if VOTEC students could be recruited into the Army, complete basic training, complete an abbreviated AIT if they passed the ASE-developed competency test, and be placed in Army units to fulfill their job requirements, and (b) if VOTEC-trained students could perform as well as Army-trained students in their Army jobs.

From February 1992 through February 1993, control group (Regular Army 63B10 recruits) and experimental group (VOTEC auto mechanic graduate recruits) will attend training for thirteen weeks (regular AIT) and four weeks (abbreviated AIT) respectively at Fort Jackson, South Carolina. Comparative analysis will be made to assess both groups' training effectiveness, attrition, knowledge retention, and job performance. Knowledge of both groups will be compared using the ASE-developed competency test scores. These soldiers will be assigned to Army jobs where, after three months, they will again take both the ASE-developed test to measure knowledge retention, and a hands-on test to measure performance. Supervisor surveys will assess job proficiency within the Army setting. Recruitment capability and cost-effectiveness will also be assessed.

VOCATIONAL TRAINING STRATEGIES REPORT - II

During January 1992, a

VTS-II report was completed that paralleled the VTS-I report comparing the curricula and costs of specific Army training with that of similar VOTEC school training. The study's purpose was to pick a second Army course upon which to conduct a second pilot study. Hanser, Davidson, and Stasz (1992) analyzed Army occupations identifying those high in civilian exchange-ability and costly to train. The top three of these Rand-identified occupations that were trained within TRADOC formed the basis for further feasibility study. The Army's 94B10 Food Service Specialist Course was selected for pilot study based on a 92% match between Army and VOTEC curricula that can replace 55% of the AIT course hours resulting in significant projected cost efficiencies for the Army.

94B10 FOOD SERVICE VOTEC PILOT STUDY

The 94B10 Food Service Pilot Study mirrors steps of the 63B10 Light Wheel Vehicle Mechanic Pilot Study. The first step of Phase I was to develop a competency test to cover training taught in both the Army and VOTEC programs. This was done using the test item data bank of the National Occupational Competency Testing Institute (NOCTI) of Big Rapids, Michigan, in coordination with the U.S. Army Quartermaster School at Fort Lee, Virginia. Control group (94B10 graduates) and experimental groups (VOTEC food service graduates) were tested during April and May 1992, using 215 secondary and 194 post-secondary VOTEC students in New York and Pennsylvania, and 217 Army students from Fort Jackson,South Carolina and Fort Lee, Virginia. An incentive survey was administered to VOTEC food service students to gather data on interests of the VOTEC population in joining the Army.

Results of Phase I of the 94B10 Pilot Study mirrored the 63B10 Pilot Study. VOTEC food service secondary school graduates scored equally as-well-as 94B10 Army graduates, while post-secondary VOTEC graduates scored statistically significantly higher than Army graduates on the NOCTI-scored competency test (t-test $p < .001$). Results of the recruitment incentive survey reflected no significant differences among choices, although educational benefits and quick promotion received highest ratings.

The 94B10 VOTEC Pilot Study moves into Phase II during FY93. Phase II includes recruitment of VOTEC food service graduates into the Army who will attend basic training, an abbreviated AIT if they pass a competency test, and placement in Army jobs. The control group (regular 94B10 soldiers) will attend nine weeks of AIT at Fort Lee, Virginia during April-May 1993, and provide comparison for the experi-mental group (VOTEC graduates) who will complete the four-week abbreviated AIT at Fort Lee during August-September 1993. Retention tests, hands-on tests, and supervisor surveys will be administered to both groups after equal time in their jobs to compare

training effectiveness and knowledge retention.

COMPETENCY TESTING

During July 1992, the Deputy Chief of Staff for Training (Plans/Support), HQ TRADOC, changed the 63B10 and 94B10 Pilot Studies from total emphasis on recruiting VOTEC graduates, to providing abbreviated AIT for all recruits who pass the competency tests. This change allows recruits who acquire job knowledge through work experience, non-traditional programs, or combinations of instruction and experience, to exhibit their knowledge on the competency test and attend the abbreviated AIT, thus reducing Army instructional costs. Each group of recruits who attend the abbreviated AIT (VOTEC graduates and non-VOTEC graduates) will be studied to determine training effectiveness, knowledge retention, and hands-on competency.

THE FUTURE

The concept of using VOTEC institutions to train soldiers holds great potential as a efficient and effective Army/VOTEC partnership. The VOTEC pre-service model shows greatest potential to reduce Army training costs while encouraging students to attend VOTEC schools in preparation for Army enlistment. Analysis of the pre-service pilot studies underway will provide valuable lessons learned and help determine if this model is realistic, efficient, and effective. Another study recently begun at Fort Gordon, Georgia will address costs of the second model and more extensively address model three. Headquarters, TRADOC is continuing to select other Army training for VOTEC study under the pre-service model.

During this period of downsizing, the Army must look for better ways of doing business. Development of a new Army training paradigm including VOTEC institutions may be the solution. Partnerships between the Army and VOTEC institutions appear to be a smart and logical way to train soldiers.

REFERENCE

Hanser, L.M., Davidson, J.N., & Stasz, C.(1992). Who should train? Substituting civilian-provided training for military training (Report No. R-4119-FMP). Santa Monica, CA: Rand Corporation.